

## REMARKS

This paper is filed in response to the Office Action mailed on October 12, 2006. Presently, Claims 1-28 are pending in the application. Of these, Claims 20-22 are withdrawn from consideration. Claims 1-15 are allowed. Claims 16-19 and 23-28 are rejected. Reconsideration of Claims 16-19 and 23-28 is respectfully requested.

### The Rejection of Claims 23, 24, 27, and 28 Under 35 U.S.C. § 112, Second Paragraph

Claims 23, 24, 27, and 28 are rejected under 35 U.S.C. § 112, second paragraph, as being incomplete for purportedly omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. The Examiner states that the omitted structural cooperative relationships are: a purifier vessel in fluid communication with a dwell chamber. As support for the rejection, the Examiner cites M.P.E.P. § 2172.01.

Applicants respectfully traverse the rejection. Applicants respectfully submit that the Examiner has misinterpreted § 2172.01.

M.P.E.P., § 2172.01 states:

A claim which omits matter disclosed to be essential to the invention as described in the specification or in other statements of record may be rejected under 35 U.S.C. 112, first paragraph, as not enabling. (*Citations omitted.*) Such essential matter may include missing elements, steps or necessary structural cooperative relationships of elements described by the applicant(s) as necessary to practice the invention.

In addition, a claim which fails to interrelate essential elements of the invention as defined by applicant(s) in the specification may be rejected under 35 U.S.C. 112, second paragraph, for failure to point out and distinctly claim the invention. (*Citations omitted.*)

Accordingly, Section 2172.01 addresses the situation only where applicants have defined an element to be "essential" to the invention in the specification. Applicants have not made such

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a statement, either in the specification or in the prosecution history. Accordingly, the Examiner has no basis for stating that Claims 23, 24, 27, and 28 lack an essential element.

Therefore, the withdrawal of the rejection of Claims 23, 24, 27, and 28 is respectfully requested.

The Rejection of Claims 16 and 19 Under 35 U.S.C. § 102(b)

Claims 16 and 19 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,274,038 (Reid).

The Reid patent describes, in Figure 1, a water purification cartridge having a top head 14 with an inlet 18. The inlet 18 is aligned radially to provide water to a central opening 13 through the neck portion 26. The neck portion 26 opens into a chamber 38. The chamber 38 is filled with iodine treated resin granules 34. Water flows axially into the chamber 38 because the inlet and the outlet to the chamber are arranged along a common axis.

Claim 16 is directed to a water purification device and recites an inlet member with a ring member adjacent to said inlet member. The claimed water purification cartridge also includes a purifier vessel, a bulkhead, and a dwell chamber.

Claim 16 has been amended to recite:

a ring member adjacent to said inlet member, wherein said ring member has a base that substantially covers the opening of a purifier vessel so that untreated water enters the purifier vessel from the sides of the opening of the purifier vessel below the base.

The ring member, as identified by the Examiner, is the neck portion 26. However, the inlet 18 and the neck portion 26 do not have the water flow as recited. Specifically, the inlet 18 produces radial flow, and the ring 26 does not have a base member that produces radial flow before entry into the chamber 38.

For a reference to be anticipatory, the reference must exactly describe the claimed invention.

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Accordingly, because Reid does not describe "an inlet member configured to provide untreated water in a first axial direction; and a ring member adjacent to said inlet member, wherein said ring member has a base that substantially covers the opening of a purifier vessel so that untreated water enters the purifier vessel from the sides of the opening of the purifier vessel below the base," the reference is not anticipatory.

Accordingly, the withdrawal of the rejection of Claims 16 and 19 as being anticipated by Reid is respectfully requested.

The Rejection of Claims 17, 18, and 23-28 Under 35 U.S.C. § 103(a)

Claims 17, 18, and 23-28 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Reid in view of U.S. Patent No. 6,548,054 (Worley et al.)

The Examiner states that Reid does not disclose polystyrene hydantoin or hydantoinylated siloxane, and that Worley et al. teaches halogenated polystyrene hydantoin. The Examiner states:

it would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute halogenated polystyrene hydantoin for halogenated resin of Reid because both are biocides used in water filters.

Claim 23 has been amended to recite "wherein the residual halogen concentration is less than 1 ppm."

Reid teaches a biocide including iodine ions. For example, iodinated polyvinylpyridine of the type disclosed in U.S. Patent No. 4,594,392.

As explained in the amendment filed on July 18, 2006, the mode of killing by hydantoinylated compounds is different than the mode of killing by iodinated resins. Applicants submit that hydantoinylated compounds kill microorganisms that come into physical contact with the hydantoinylated compounds. Accordingly, applicants' compounds have a low residual halogen concentration. Iodinated resins rely on providing a high dose of iodine in the water.

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This is evident from the teachings of U.S. Patent No. 4,594,392 (Hatch) that is incorporated into the Reid patent.

Upon review of the Hatch patent, at Col. 8, Hatch teaches the halogen concentration in the effluent of the various halogenated and/or interhalogenated vinylpyridine resins prepared in accordance with the Hatch invention. Table 3 shows that the lowest percentage of total halogen concentration in the effluent is 8.2 mg/L as I<sub>2</sub>.

Accordingly, Reid teaches a halogen concentration in excess of 1 ppm, which is in contrast to Claim 23.

A *prima facie* rejection requires the prior art references teach or suggest all the claim limitations. Neither Reid nor Hatch teach or suggest wherein the residual halogen concentration is less than 1 ppm.

Accordingly, the withdrawal of the rejection of Claims 23, 24, and 28 is respectfully requested.

Further, because Claims 17, 18, 25, and 26 depend from Claim 16, these claims are allowable by this reason alone.

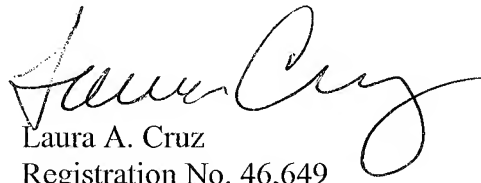
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CONCLUSION

In view of the foregoing amendments and remarks, applicants submit that Claims 1-19 and 23-28 are allowable. If the Examiner has any further questions or comments, the Examiner is invited to contact the applicants' attorney at the number provided below.

Respectfully submitted,

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